UNITED STATES PATENT AND TRADEMARK OFFICE

NOTICE OF ALLOWANCE AND FEE(S) DUE

57694 7590 04/16/2009		

JONES DAY
222 East 41st Street
New York, NY 10017-6702

EXAMINER
LINDLOF, JOHN M

ART UNIT	PAPER NUMBER
2183	

DATE MAILED: 04/16/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,380	10/20/2003	Mark Beaumont	DB001072-000	3361

TITLE OF INVENTION: METHOD FOR MANIPULATING DATA IN A GROUP OF PROCESSING ELEMENTS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	07/16/2009

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT.
PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS.
THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON
PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS** FROM THE
MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS
STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES
NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS
PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM
WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW
DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current
SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown
above.

B. If the status above is to be removed, check box 5b on Part B -
Fee(s) Transmittal and pay the PUBLICATION FEE (if required)
and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now
claiming SMALL ENTITY status, check box 5a on Part B - Fee(s)
Transmittal and pay the PUBLICATION FEE (if required) and 1/2
the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office
(USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b"
of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a
request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing
the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to
Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of
maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.**

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

57694   7590   04/16/2009

JONES DAY
222 East 41st Street
New York, NY 10017-6702

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)

_____ (Signature)

_____ (Date)

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nonprovisional	NO	$1510	$300	$0	$1810	07/16/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
LINDLOF, JOHN M	2183	712-017000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE   (B) RESIDENCE: (CITY and STATE or COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☐ Issue Fee

☐ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

☐ A check is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.   ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____   Date _____

Typed or printed name _____   Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

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Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 393 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 393 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 08/07) Approved for use through 08/31/2010.

	Application No.	Applicant(s)
Notice of Allowability	10/689,380	BEAUMONT, MARK
	Examiner	Art Unit	
	JOHN LINDLOF	2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to <u>pre-brief conference request filed 1/12/2009</u>.

2. ☒ The allowed claim(s) is/are <u>1-26</u>.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☒ All   b) ☐ Some*   c) ☐ None of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the
           International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF
    INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
        Paper No./Mail Date _____ .

    **Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of
    each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the
    attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3. ☒ Information Disclosure Statements (PTO/SB/08),
    Paper No./Mail Date <u>12/09/2008</u>

4. ☐ Examiner's Comment Regarding Requirement for Deposit
    of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),
    Paper No./Mail Date _____ .

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

/Eddie P Chan/
Supervisory Patent Examiner, Art Unit 2183

DETAILED ACTION

1.   Claims 1-26 are allowed.

Examiner's Reasons For Allowance

The following is an examiner's statement of reasons for allowance:

The claims are allowed in view of the reasons argued by the applicant in communication filed on 1/12/2009. In particular, the prior art, independently or in combination, does not anticipate and reasonably teach the specific aspects of issuing a command to a plurality of processing elements arranged in an array; maintaining a count in each of a plurality of processing elements, each count being responsive to a processing element's location in said array; receiving data in each of said plurality of processing elements from processing elements connected thereto in response to the execution of said command; selecting from among the received data, where each of the received data is a candidate for selection, one of the received data for output in response to that processing element's count; and saving said selected data.

The prior art made of record teaches selecting and shifting data through arrays of elements, however, individual counts within each element are not used to determine the selection of data. Further, selecting is not done based on its location count, where each of the received data is a candidate for selection.

In particular, the prior art, independently or in combination, does not anticipate and reasonably teach the specific aspects of method of controlling the data selected as output data by a plurality of processing elements, comprising: issuing an instruction set to said plurality of processing elements, said instruction set being performed through a

series of data shifts; each processing element: receiving data from processing elements connected thereto as a result of said data shifts; maintaining a count responsive to said data shifts; selecting from among the received data, where each of the received data is a candidate for selection, one of said received data based on said count; and saving said selected data.

The prior art made of record teaches selecting and shifting data through arrays of elements, however, individual counts within each element are not used to determine the selection of data. Further, each element does not select its data based on its location count, where each of the received data is a candidate for selection.

In particular, the prior art, independently or in combination, does not anticipate and reasonably teach the specific aspects of a method of controlling the position of data in a plurality of processing elements, comprising: shifting data within the plurality of processing elements along one of a row, column or diagonal in response to a command issued to said plurality of processing elements; each active processing element receiving data from processing elements connected thereto as a result of said data shifting; each active processing element selecting from among the received data, where each of the received data is a candidate for selection, one of the received data as a final output in response to that processing element's location within the plurality of processing elements; and saving said selected data.

The prior art made of record teaches selecting and shifting data through arrays of elements, however, individual locations for each element are not used to determine the selection of data. Further, each element does not select its data based on its location,

where each of the received data is a candidate for selection.

In particular, the prior art, independently or in combination, does not anticipate and reasonably teach the specific aspects of a method for controlling the position of data in a matrix of processing elements, comprising: shifting data within the matrix of processing elements in response to a command; each active processing element receiving data from processing elements connected thereto as a result of said data shifting; maintaining a current count in each active processing element responsive to the number of data shifts; each active processing element selecting from among the data that processing element has received, where each of the received data is a candidate for selection, output data as a function of that element's current count; and saving said selected data.

The prior art made of record teaches selecting and shifting data through arrays of elements, however, individual counts within each element are not used to determine the selection of data. Further, each element does not select its data based on its count, where each of the received data is a candidate for selection.

In particular, the prior art, independently or in combination, does not anticipate and reasonably teach the specific aspects of a method, comprising: shifting data within a plurality of processing elements in response to a command; receiving data within each processing element from processing elements connected thereto as a result of said data shifting; each active processing element selecting from among the data that processing element has received, where each of the received data is a candidate for selection, data as a final output in accordance with the formula f(x_Index, y_ Index, z

Index) where f is dependent upon the desired output; and saving said selected data.

The prior art made of record teaches selecting and shifting data through arrays of elements, however, individual location indexes for each element are not used to determine the selection of data. Further, each element does not select its data based on its location index, where each of the received data is a candidate for selection.

In particular, the prior art, independently or in combination, does not anticipate and reasonably teach the specific aspects of a method, comprising: shifting data within a plurality of processing elements in response to a command; receiving data within each processing element from processing elements connected thereto as a result of said data shifting; each active processing element selecting from among the data that processing element has received, where each of the received data is a candidate for selection data as a final output in accordance with the formula f (d(0), d(l), d(2) .... d(n-1)) where f is dependent upon the desired output; and saving said selected data.

The prior art made of record teaches selecting and shifting data through arrays of elements, however, individual formula locations for each element are not used to determine the selection of data. Further, each element does not select its data in accordance with the location formula, where each of the received data is a candidate for selection.

In particular, the prior art, independently or in combination, does not anticipate and reasonably teach the specific aspects of a computer readable storage medium carrying a set of instructions which, when executed, perform a method comprising: receiving a command issued to a plurality of processing elements; maintaining a count

in a processing element, said count being responsive to said processing element's location; receiving data from processing elements connected to said processing element in response to the execution of said command; selecting, from among the received data, where each of the received data is a candidate for selection, data for output in response to said processing element's count; and saving said selected data.

The prior art made of record teaches selecting and shifting data through arrays of elements, however, individual counts within each element are not used to determine the selection of data. Further, selection of data is not based on its location count, where each of the received data is a candidate for selection.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN LINDLOF whose telephone number is (571)270-1024. The examiner can normally be reached on Monday-Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on (571) 272-4162. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

   Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eddie P Chan/
Supervisory Patent Examiner, Art Unit 2183

John Lindlof
(571) 270-1024